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## The Economic Significance and Traditional Management of Dromedaries in Syria

The one-humped Arabian camel, or dromedary, was originally used as a food animal in Syria, and later as a beast of burden. It is a ruminating mammal which stores fat in the hump on top of its body. Its feet are broad, flat, leathery pads, with two toes on each foot, designed to prevent them from sinking in the sand. The ancestor of today's camel originated in the Syrian region but is now extinct<sup>1</sup>. It lived around 100,000 years ago, was up to three meters tall at the shoulder and measured four meters overall (see picture 44). Fossil evidence of this was first discovered late in 2005, and more finds were made about a year later (Owen 2010).

A rare limestone tablet dating back to the second century CE was also unearthed by Syrian archeologists (see picture 45) in the centre of the ancient city of Palmyra, which is situated on one of the famous trading routes in the Middle East. The tablet depicts two young men from the city and a child, standing beside a camel which carries many items on its back including a long javelin (Baur et al. 1933, Brentjes 1960).

Arabs in the Mesopotamia and Para-Mesopotamia area, known as Greater Syria and Arabia, lived closely with their domesticated camels. In their culture, camels were treated as part of the family, all of them had names and many had special nicknames. Not only were there many songs and stories about camels in literature, but camels also were considered a flagship species in the Qur'an and Hadith (Gauthier-Pilters/Dagg 1981, Douglas 1939, Compagnoni/Tosi 1978).

### CAMEL HYBRIDS

From the seventeenth century onward, a series of European travelers, anthropologists and veterinary scientists have amassed an important record of observations of the intentional cross-breeding of Bactrian and dromedary camels (Kolpakow 1935, Menges 1935, Tapper 1985). The main advantage of the hybrid over the purer species, to both nomadic and commercial users, is less its supposed versatility than its vastly greater size, strength and carrying capacity, its esthetically pleasing appearance and its correspondingly greater value, in both financial and ceremonial terms. In view of this evidence, which extends from Anatolia and Syria in the west to Afghanistan in the east, it is certain that small numbers of Bactrian camels have been kept over the past 300 to 400 years by groups of Syrians who, in the main, raised dromedaries for the purpose of producing hybrids of outstanding strength. Further, these hybrids were used specifically as caravan and draught animals. It can therefore at least be suggested that the reason why Assyrian kings seized Bactrian camels and demanded them as tribute from Iranian lands to the east of Assyria was to acquire studs and breeding females in order to practice the same sort of hybridization with a view to developing stronger pack animals for a variety of purposes (military, commercial, agricultural). While there is yet no archeological evidence of camel hybridization from the Assyrian period, there is some from later periods in the Near East, which demonstrates that hybridization was practiced in antiquity in Syria and Arabia (Potts 2004).<sup>2</sup>

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<sup>1</sup> A more detailed discussion about the archeozoology of camels in south-eastern Arabia see the Uerpmann and Uerpmann in this volume.

<sup>2</sup> For a further discussion of cross-breeding between dromedaries and Bactrian camels see the article by Faye and Konuspayeva in this volume.

### ADAPTION TO THE ENVIRONMENT

Today's Syrian dromedary is well adapted to the hot, arid climate and the flat terrain. Adult animals stand 215 cm to the top of their humps. Weighing 300 to 600 kg, camels can carry loads of 130 to 200 kg and can walk for extended periods. Some dromedary caravans can cover as much as 40 km a day. A riding dromedary however, which is a specialized breed, can maintain a speed of 13–16 km/h for up to 18 hours (Köhler-Rollefson 1989).

Evolved to live in desert areas, the camel has few natural enemies, and is consequently much less skittish than a horse. Though notoriously ill-tempered, it is docile enough when properly trained and handled. It has better endurance than a horse and can forage on practically any type of grass, leaf or twig. The camel's ability to go for a week without drinking is well-known. Evolved for desert conditions, camels do not prosper in wet climates, as they interfere with their procreative cycle .

### RIDING CAMELS IN COMBAT

Combined with other adaptations to desert conditions, dromedaries offer their riders remarkable strategic mobility. As a combat animal, the camel has much potential. In the Middle East area they were used for battles and riding, but later on, when horses became domesticated, dependency on the camel started to decline. Their advantages were largely outweighed by disadvantages, thus limiting their range and importance as a beast of war.

Riding dromedaries effectively was difficult since the animal's hump – a store of fat – will break down and collapse under a heavy burden. One of the solutions was to put a cushioned saddle on top of the rump of the animal or to surround the hump with cushions, which were then tied at the front and back (see picture 48). The reliefs of Ashurbanipal show raiding Syrians on camels, each with two naked riders, one of whom controls the animal with a long stick while the other fires a large self-bow. Perched uneasily on cushions as they both were, it is unlikely that either man could have used any sort of melee weapon. The well-armed Assyrians probably had no problems defeating them.

Sometime after 500 BCE, however, the North Arabian saddle was invented. This consisted of two large arches or saddle bows shaped like inverted Vs, which were connected by sticks resting on pads set in front of and behind the hump. A rider could sit firmly on cushions placed on the saddle and hang equipment and supplies on it (see an example from Al Badia Festival in Hama – Ibn Wardan Palace in picture 46).<sup>3</sup> Later, better equipped dromedary riders had greater military impact, playing an important role in allowing first the Nabataean Arabs and then the city dwellers of Palmyra to dominate desert trade routes.

### THE US ARMY PINS ITS HOPES ON SYRIAN CAMELS

Syrian camels played a role in US history too. After acquiring huge new territories, including California and Arizona, as a result of the 1846 to 48 Mexican-American War, the US government was confronted with the task of finding a reliable way of supplying its garrisons in the new lands.

The US Navy, represented by Major Henry Wayne, who was sent to the Middle East to find camels, brought them from Syria in 1856 with the idea of supplying US garrisons across the Sonoran and Mojave deserts. Many questioned whether horses and mules would make the journey across these scorching deserts with loads of guns and ammunition, so the military decided to try camels. War secretary Jefferson Davis, the future Confederate President, personally ap-

<sup>3</sup> The article by Walter Dostal in this volume gives additional insights on camel-riding techniques and saddle variation in the Arabian Peninsula.

proved the plan and in 1856 the US Navy supply ship was dispatched to Syria to purchase the animals (see picture 47). Sailing back with the first herd of three-dozen dromedaries was their Syrian driver, Hadji Ali, the US Army's newest recruit. A second trip to Syria brought the size of the herd to 100, and in 1857 Ali, by then nicknamed Hi Jolly, set out with his first caravan from Fort Defiance, Texas, to southern California. That trek and many others were successfully completed. The camels were auctioned off with the first shots of the Civil War, but many eventually found themselves abandoned in the desert, which they roamed for many years afterwards. A heartbroken Ali survived by working as a scout and prospector until he died outside the town of Quartzsite, Arizona, in 1902. A pyramid-shaped monument topped with a copper silhouette of a camel marks the gravesite of the Syrian, who is recognized for over 30 years of "faithful service to the US government" (Woodburg 2008, Kniazkov 2004).

### PASTORALISTS' STRUGGLE FOR SURVIVAL

In Syria, as in many other extremely dry zones, camels are the preferred livestock species, enabling people to live in otherwise uninhabitable areas. Camels' attributes include the ability to go without water for days without decreasing their feed intake and milk yield, utilizing feed that is unpalatable to other species, the ability to carry heavy loads over long distances, and a low susceptibility to disease. They also ensure a sustainable livelihood for their owners by generating milk for subsistence and providing income from the sale of excess animals, while constituting a source of capital accumulation.

Syrian pastoralists are now being forced into more marginal areas owing to population pressures and restrictions on their grazing rights. Here, there are greater risks of disease to camels and a lack of access to basic human amenities, including water and health facilities. Such areas are typically far from markets, leading to the waste of excess milk (beyond that needed by offspring and herders' families), camel hair and hides, which could each be a source of additional income. As pastoralists' need for cash increases, they tend to keep a higher proportion of small ruminants and cattle, because these command higher market prices than camels, as camel products are not very commonly consumed by Syrians. This reduces the stability of the ecosystem and results in a vicious circle of environmental degradation, through the increased number of small ruminants overgrazing the steppe, causing desertification. As poor pastoralists become poorer, they are often forced to sell their few remaining animals to large herders. To break this syndrome and to avoid working as hired laborers or migrating to urban unemployment, herder pastoralists are looking for new ways to utilize their animals. Building networks can be an effective strategy for pastoralists to secure their income.

The Camel Applied Research and Development Network (CARDN) was founded in Syria in 1991, but operations only began after the signing of a contract with the Arab Center for the Studies of Arid Zones and Dry Lands (ACSAD) as the executing agency in 1996. The network operates through national coordinators in ten member countries. The general objective is to ensure continuing and sustainable use of dry-land range by camel keeping by mainly non-sedentary pastoralists, avoiding further degradation of land and vegetation, thereby assuring continuation of the pastoralist production system, reducing its risks, improving living conditions and alleviating poverty. A general assembly and an executive committee with country representatives – mainly at ministerial level – provide recommendations for the network's operations. The coordinator of the network operates from ACSAD headquarters in Damascus.

According to the challenging situation for pastoralists, the number of camels in Syria has fluctuated over the last 100 years. Especially over the last 30 years their numbers have decreased dramatically. As the number of cars increased and a network of asphalt roads was constructed across the rural areas linking the major cities, the camel owners dispensed with camels for riding and as a means of transport. In 1922 there were about 250,000 Camels in Syria. This increased to 772,000 in 1938 and then declined again, so that by 1954 there were only 106,000 animals left. Again, numbers picked up to 629,000 in 1958. Today, numbers are at their lowest

level ever, with only 22,000 camels in the whole country. This wide variation in numbers was related to the use of camels in the different periods as a draught animal, then falling out of use as transport in the Syrian steppe was taken over by motor vehicles.

### THE SPECTRUM OF SYRIAN CAMELS

There are several different varieties of dromedary in Syria (see picture 49) but the predominant variety in the steppe region is the *Shamyeh* breed. These are characterized by a small head, long neck and a thick upper lip, which they use to touch food before eating. It is also characterized by the convex forehead, small erect ears and its average size. Other features include a thick-set body, abundant hair on the hump and limbs, a thin, medium-length tail, light eye color and long eyelashes. It also has long legs, in males up to about 92 cm; the height of the withers, i.e. the ridge between the shoulder blades, is 195 cm in males and 182 cm in females; the chest circumference is about 226 cm in males and 220 cm in females. The body circumference around the hump is 264 cm; the length of the body with the neck is up to 3 m. The weight ranges between 650 and 783 kg in males and between 574 and 680 kg in females .

Another variety, the *Al Khowar* dromedary, spread from Iraq to the border region of the Deir Azzor steppe and Al Jazeera in Syria. This is characterized by its medium-sized head, its long, thin limbs and thin tail, which are light colored. It is known for its high milk yield

The *Al Jodiyeh* dromedary existed in the Palmyra steppe and the Syrian *Al Hamad* dromedary, which is characterized by its big bones and large body, is used for carrying and transport. This variety spread into Syria with the *Al Najdi* dromedary, also distinguished by its large size. Sudanese *Al Tyhyeh* dromedaries and a few from Egypt have also found their way into the country .

Dromedaries are called by different names among the people of the Syrian steppe according to the location. For example, *Al Eas*, *Fater*, *Thalool*, *Mateyeh*, *Baear*, and the significance of each name is linked to the animal's color (Asaad 1990). See table 10 for some examples.

|                     |   |
|---------------------|---|
| <i>Al Maghateer</i> | light-coloured (white)  |
| <i>Abdan</i>        | black-coloured  |
| <i>Al Majaheem</i>  | dark colours  |
| <i>Al Wadha</i>     | white colours   |
| <i>Al Malha</i>     | black colours   |
| <i>Al Hamleh</i>    | red colours   |
| <i>Al Shealeh</i>   | white & black hair  |
| <i>Etrah</i>        | dark cream colour   |
| <i>Al Zaqaa</i>     | grey colour   |
| <i>Al Shaqha</i>    | black eyes, beige yellowish colour, white front legs, (colour is like a gazelle)                                  |
| <i>Al Hamraa</i>    | light red colour  |
| <i>Al Sahmeh</i>    | dark red colour, black nose, black hump tip, black shoulder tip, white legs and their sides tend to be pale white |

Table 10: Names of camels in Syria according to their colors.

Dromedaries are also given special names by their breeders according to their use, as table 11 shows:

|                   |  |
|-------------------|--|
| <i>Al Thalool</i> | used for riding and racing   |
| <i>Al Zamel</i>   | used for carrying  |
| <i>Fater</i>      | To be slaughtered  |
| <i>Qaedeh</i>     | used as guide for other dromedaries and ridden by 'a dromedary man' referred to as <i>Rahool</i> |

Table 11: Names of camels in Syria according to their use.

|                  |  |
|------------------|--|
| <i>Hewar</i>     | from birth until the age of 6–7 months     |
| <i>Makhlool</i>  | from 8 months to a year                    |
| <i>Ben Labon</i> | of two years of age (called <i>Lajy</i> )  |
| <i>Haq</i>       | 3 years and into the fourth                |
| <i>Jethea</i>    | 4 years and into the fifth                 |
| <i>Thani</i>     | 5 years and into the sixth                 |
| <i>Rabbaa</i>    | 6 years and as it enters the seventh       |
| <i>Khamasi</i>   | 7 years and as it enters the eighth        |
| <i>Muneib</i>    | canine development is completed            |
| <i>Malol</i>     | 8 years                                    |
| <i>BoThani</i>   | 9 years (2nd year after canine complete)   |
| <i>BoThaleth</i> | 10 years (3rd year after canine complete)  |
| <i>BoRabea</i>   | 11 years (4th year after canine complete)  |
| <i>BoKhames</i>  | 12 years (5th years after canine complete) |

Table 12: References to dromedaries in Syria according to their growing stages.

Dromedary breeders in Syria have been organized in three groups according to their situation and distribution. Most of them are from specific clans.<sup>4</sup>

## CONCLUSIONS

Camels played important historic socio-economic roles within the pastoral systems in the dry areas of ancient Syria. Their role in Syria as a domestic animal is now undergoing fundamental change as subsistence nomadism shifts towards semi-sedentary, cash-based systems. The existing camels of the poor families in arid areas of east Syria must become more productive and competitive if the communities concerned are to survive. As Greater Syria and Arabia were divided into smaller countries with political borders (that is, today's countries of Lebanon, Jor-

<sup>4</sup> The Association of Breeding Dromedaries in Palmyra, for example, is located in Al Talilah Natural Reserve 30 km east of Palmyra, and the steppe of Palmyra in the middle of Syria. Most of its members are from Al Sabaa clan and a few from Al Roleh and Bani Khaled. They use the grazing in the steppe of Palmyra, and now reach Al Beghali, Al Kom and the West Hir Palace north of Palmyra. It has 53 members who between them own 3850 dromedaries. Another association, the Association of Breeding Dromedaries in DerAzzor, operates in the Euphrates valley. The majority of its members are from Al Fadaan clan and a small group from Al Sabaa and Al Roleh. They use the grazing in the Der Azzor Steppe from Der Azzor to the Iraqi border. It has 35 members who between them own 2700 dromedaries (Asaad 1990).

dan, and Palestine, and Gulf states, emirates and kingdoms), citizens limited their travels and tended to stay within their own political divide. Camels, however, are oblivious to such things and even today continue to cross the imaginary lines, acting as symbols of a free world.

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